

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

AGERE SYSTEMS, INC., et al.,	:	
	:	
Plaintiff,	:	Civil Action No. 02-CV-3830
	:	
v.	:	
	:	DECLARATION OF SETH v.d.H.
ADVANCED ENVIRONMENTAL	:	COOLEY IN SUPPORT OF
TECHNOLOGY CORPORATION, et al.	:	DEFENDANTS' MOTION FOR
	:	PARTIAL SUMMARY
Defendants.	:	JUDGMENT

Seth v.d.H. Cooley, pursuant to 28 U.S.C. § 1746, hereby declares as follows:

1. I am an attorney admitted to the bar of the Commonwealth of Pennsylvania and with the firm of Duane Morris LLP, 30 S. 17th Street, Philadelphia, Pennsylvania 19103, attorneys for Defendant fcg, inc. (t/a Flexible Circuits, Inc.) in this matter. I am admitted to practice before this Court, and am an attorney of record in this matter.

2. A true and accurate copy of pages 1-3 of the United States Environmental Protection Agency ("USEPA") Record of Decision, Boarhead Farms, November 18, 1998, is annexed hereto as Exhibit 1.

3. A true and accurate copy of a Memorandum from Edwin B. Erickson, Regional Administrator, USEPA Region 3, to Donald R. Clay, Assistant Administrator, USEPA, Office of Solid Waste and Emergency Response, September 4, 1992, is annexed hereto as Exhibit 2.

4. A true and accurate copy of the USEPA January, 1998 Proposed Plan for the Boarhead Farms Site is annexed hereto as Exhibit 3.

5. A true and accurate copy of pertinent pages of the Consent Decree entered by this Court on March 14, 2002 ("OU-2 Consent Decree") in Civil Action No. 01-CV-6109 is annexed hereto as Exhibit 4.

6. A true and accurate copy of the Revision to Notice of Lodging of Consent Decree Under the Comprehensive Environmental Response, Compensation, and Liability Act Published on January 8, 2002, U.S. Department of Justice, Wednesday, January 23, 2002, 67 FR 3233, is annexed hereto as Exhibit 5.

7. A true and accurate copy of pertinent pages of the Consent Decree entered by this Court on September 28, 2000 ("OU-1 Consent Decree") is annexed hereto as Exhibit 6.

8. A true and accurate copy of a letter from Glenn Harris, Esquire to "Boarhead Defendants," July 12, 2007, is annexed hereto as Exhibit 7.

9. A true and accurate copy of a USEPA cost report re services rendered by "Environmental Technology of North America" for "Period of Performance" 6/18/92 to 06/18/93, BSAI 082200 - BSAI 082201, is annexed hereto as Exhibit 8.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: _____

2/22/08

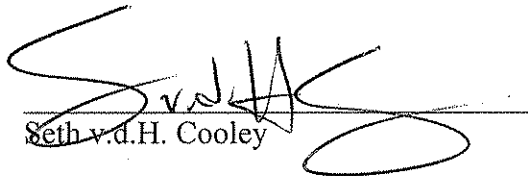

Seth v.d.H. Cooley

EXHIBIT “1”

**EPA/ROD/R03-99/009
1999**

**EPA Superfund
Record of Decision:**

**BOARHEAD FARMS
EPA ID: PAD047726161
OU 01
BRIDGETON TOWNSHIP, PA
11/18/1998**

RECORD OF DECISION

BOARHEAD FARMS SUPERFUND SITE

PART II - DECISION SUMMARY

I. SITE NAME, LOCATION, AND DESCRIPTION

The Boarhead Farms Superfund Site (Site) is located in Bridgeton Township, Bucks County, Pennsylvania. The Site consists of approximately 120 acres on Lonely Cottage Road in Upper Black Eddy, in the western part of Bridgeton Township (Figure 1). Approximately one half of the Site is wooded and nonwooded wetlands. Other features of the Site include open field areas, four manmade ponds, wooded uplands, a farmhouse, office, and stable (Figure 2).

Aerial photographs indicate that the property was heavily wooded prior to 1969. In 1969 Manfred DeRewal Sr. (hereafter referred to as "Mr. DeRewal") incorporated Boarhead Corporation (BHC) and DeRewal Chemical Company (DCC) and acted as president of both companies. BHC purchased the Site in 1969 and remains the current legal owner. Keystone Excavation Company once leased a portion of the Site to store and maintain excavating and hauling equipment.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

Prior to his tenure at Boarhead Corporation, Mr. DeRewal operated the Revere Chemical Site in Revere, Bucks County, Pennsylvania from 1965 to 1969. The Pennsylvania Department of Environmental Resources (PADER), now known as the Pennsylvania Department of Environmental Protection (PADEP), ordered the Revere Site closed in 1970 due to numerous pollution violations. During legal proceedings, Mr. DeRewal claimed that he moved 260,000 gallons of "liquid waste" from Revere between July 17, 1970 and August 4, 1970. No documentation was available to indicate where the waste was disposed. The Boarhead Farms Site is four miles from Revere.

In the early 1970s, the Pennsylvania State Police began receiving complaints of dead fish, dead plant life, and foaming along the edges of a stream on property adjacent to the Boarhead Site. The complaint alleged that the pollution was caused by acid dumped into the stream from tank trucks at the Site. The Bucks County Department of Health (BCDOH) investigated the complaints and observed pungent odors at the Site. BCDOH also noted drums aboard an open trailer, unused drums awaiting burial, and large empty tanks awaiting removal. In addition, BCDOH reported a bulldozer onsite burying old drums. According to statements by Mr. DeRewal, the old empty drums were crushed and buried on the Boarhead Site property. BCDOH also noted that approximately 40 drums were filled with an unspecified solvent and staged above

ground. In addition, empty tanker trucks were parked on the Site. BCDOH attempted to inspect the Site further, but Mr. DeRewal denied access in the absence of a search warrant.

On March 5, 1973, BCDOH obtained a search warrant and inspected the Site. BCDOH's "Waste Discharge Inspection Report" recorded improperly stored chemicals resulting in the spillage of liquid and solid waste on the ground. Chemicals were observed leaking from 55-gallon drums, in waste pools along the access road, and in onsite lagoons and vats. Hazardous materials were also stored improperly in leaking drums and broken bags. Chemicals documented at the Site included copper ammonium sulfate, paint solvents, arsenic pentoxide, pesticides, and copper naphtholate. A BCDOH memorandum identified a cleared area northeast of the onsite office as the location of an unspecified amount of buried drums.

On March 21, 1973, BHC and Mr. DeRewal executed an agreement with PADER to address environmental conditions at the Site. It was agreed that all industrial and solid waste, buried drums, and contaminated soil would be removed from the Site. Storing of hazardous waste, landfilling operations and parking of tanker trucks were banned. In October 1973, however, a neighbor noticed discoloration and foaming in a stream on his property. BHC was found in violation of the Pennsylvania Clean Streams Law for releasing chemical waste without a permit. The contamination came from a leaking tanker truck carrying ferrous chloride. The truck had discharged its entire load, approximately 3,000 gallons of ferrous chloride, at the Site.

Groundwater and soil samples taken from the Site in July 1974 by a consultant hired by Boarhead Corporation revealed pH readings of 2.9. The presence of chloride, iron, chromium, copper, zinc, and nickel were also noted. In April 1976, approximately 4000 gallons of liquid ammonia were released from an open valve on a tanker truck. The ammonia odor was noted by BCDOH in the open fields, near the ponds, and on Lonely Cottage Road. In September 1976, a new complaint about an ammonia odor was reported. The Bridgeton Police Department arrived at the Site and found a strong ammonia smell and a heavy fog by a storage tank. The tank contained sulfuric acid and had developed a leak, creating a sulfuric mist. Thirty-four local residents were evacuated as a result.

On October 15, 1976, the Court of Common Pleas of Bucks County issued an order to Manfred DeRewal and Boarhead Corporation prohibiting all chemicals from entering the Site in amounts greater than necessary for normal household use. All chemicals on the property were ordered removed within seven days.

EPA conducted a site inspection (SI) of Boarhead Farms in May 1984 and issued a final SI report on January 20, 1986. EPA issued a Hazardous Ranking System (HRS) report on September 4, 1987. The HRS report scored the Site at 39.9. EPA placed the Site on the National Priorities List (NPL) on March 31, 1989. EPA conducted a Remedial Investigation (RI) and Feasibility Study (FS) for the Site. The RI was completed in January 1997. The Feasibility Study (FS) was

completed in July 1997. The Proposed Plan for comprehensive Site cleanup was issued in January 1998.

EPA has conducted three removal actions at the Boarhead Farms Site. During the first two, one each in 1992 and 1993, over 2500 buried drums were located, excavated and disposed of offsite, reducing the contaminant levels in the subsurface soils. The excavated areas were then covered with a layer of clean fill to reduce exposure risk. A third removal action to intercept, collect and treat contaminated groundwater in an onsite treatment facility is continuing at this time. The interception trench is approximately 1300 feet in length and is located downgradient from the high VOC and metals concentration areas. The trench intercepts the shallow and intermediate groundwater flowing through the Site and pumps it to an onsite treatment facility for removal of VOCs. In addition, residential wells where contamination was found have been equipped with granular activated carbon (GAC) filters.

A fourth removal action was performed by General Ceramics, Inc. (GCI) pursuant to an Administrative Order by Consent dated December 11, 1992 (EPA Docket No. III-92-66-DC). GCI excavated and removed drums and soils contaminated with radioactive wastes. EPA has determined that all known radioactive wastes have been removed from the Site.

III. HIGHLIGHTS OF COMMUNITY PARTICIPATION

The documents which EPA used to develop, evaluate, and select a remedy for the Site have been maintained at the Bucks County Library Center, 150 S. Pine Street, Doylestown, PA and at the EPA Region III Office, Philadelphia, PA.

The Proposed Plan was released to the public on January 5, 1998. The notice of availability for the RI/FS and Proposed Plan was published in the January 5 and 9, 1998 editions of *The Intelligencer Record* and *The Morning Call*, as well as in the January 8, 1998 edition of *The Delaware Valley News*. A 30-day public comment period began on January 5, 1998 and was initially scheduled to conclude on February 4, 1998. By request, the public comment period was extended until April 5, 1998.

A public meeting was held during the public comment period on January 14, 1998. At the meeting, representatives from EPA answered questions about the Site and the remedial alternatives under consideration. Approximately 30 people attended the meeting, including residents from the impacted area, potentially responsible parties, and news media representatives. A summary of comments received during the comment period and EPA's responses are contained in Part III of this document.

EXHIBIT “2”



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

ORIGINAL
(Red)

SEP 04 1992

SUBJECT: Approval of a Request for a \$2 Million Statutory
Exemption for Removal Actions and a Ceiling Increase
Boarhead Farms NPL Site
Upper Black Eddy, Bucks County, Pennsylvania

FROM: Edwin B. Erickson *[Signature]*
Regional Administrator (3RA00)

TO: Donald R. Clay, Assistant Administrator
Office of Solid Waste and Emergency Response (OS-100)

THRU: Henry L. Longest II, Director
Office of Emergency and Remedial Response (OS-200)

ATTN: Deborah Y. Dietrich, Acting Director
Emergency Response Division (OS-210)

The attached CERCLA \$2 Million Exemption Request and Ceiling Increase pertains to the Removal Action at the Boarhead Farms NPL Site in Upper Black Eddy, Bucks County, Pennsylvania. The Removal Action began on June 29, 1992 to mitigate direct contact threats to humans, the threat of release of hazardous substances, and the threat of fire and/or explosion posed by buried drums at this Site. The Region previously approved funding up to \$1,934,000 on July 24, 1992.

Removal activities at the Site include the excavation of drums in various stages of deterioration. Test trenches indicate that numerous drums remain buried. Hazardous substances found in the drums excavated so far include: cyanides, acids with pH of 0, bases with pH of 14, and flammables. Remaining buried drums are expected to contain the same or similar substances. Soil contamination from leaking drums is extensive.

Because the conditions at the Boarhead Farms Site continue to meet the criteria set forth in the NCP, Section 300.415 for Removal Actions and the criteria in CERCLA Section 104(c)(1)(C) (Exemption to the \$2 Million limit for Removals based on the consistency waiver), and pursuant to the Delegation of Authority 14-2-B giving the Regional Administrator authority to approve continued Removal Actions above \$2 Million pursuant to the consistency waiver at NPL Sites, Region III has approved the use

BSAI005508

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of additional CERCLA funds in the amount of \$6,239,000 to further characterize the property and properly secure and dispose of the hazardous materials encountered at the site. The new project ceiling is \$8,173,000 of which \$7,458,000 are extramural ^(red) costs.

Attachment: Request for a \$2 Million Exemption and Ceiling Increase

EXHIBIT “3”



Mid-Atlantic Superfund

You are here: [EPA Home](#) [Mid-Atlantic Cleanup](#) [Mid-Atlantic Superfund](#) [Pennsylvania Sites](#) [Boarhead Farms](#) [Proposed Plan January 1998](#)

Boarhead Farms

Boarhead Farms Site
Bridgeton Township Bucks County, Pennsylvania
January 1998

EPA Announces Proposed Plan

The United States Environmental Protection Agency Region III (EPA) has identified the Preferred Alternative to address hazardous contamination ***ingroundwater*** *, soil, surface water, and sediment at the Boarhead Farms **Superfund** Site (Site) located in Bridgeton Township, Bucks County, Pennsylvania.

Terms in ***bold italic*** are defined in the Glossary.

This Proposed Plan is based on site-related documents contained in the **Administrative Record** for the Site including the **Remedial Investigation (RI)**, the **Baseline Risk Assessment (BLRA)**, the **Ecological Risk Assessment (ERA)**, and the **Feasibility Study (FS)**. The Administrative Record is at the following locations:

Bucks County Library Center
150 S. Pine Street
Doylestown, PA 18901
Director: Inita Ruis
215-348-9081
Hours:
Monday - Thursday : 9:00 a.m. - 9:00 p.m.
Saturday: 9:00 a.m. - 5:00 p.m.

Administrative Record Coordinator
Anna Butch
butch.anna@epa.gov
U.S. Environmental Protection Agency, Region 3
1650 Arch St.
Philadelphia, PA 19103-2029
215-814-3157
Hours: Monday - Friday 8:30 a.m. - 4:30 p.m.

EPA's Preferred Alternative includes soil aeration and treatment of **Volatile Organic Compound (VOC)** hot spots; drum excavation and offsite disposal; groundwater extraction, metals precipitation and air stripping; institutional controls and monitoring; and residential water treatment.

EPA and the Commonwealth of Pennsylvania encourage the public to review and comment on the Preferred Alternative, the Proposed Plan, and other documents in the Administrative Record file. The public comment period begins on January 5, 1998 and closes on February 4, 1998. On January 14, 1998 at 7:00 PM, EPA will hold a public meeting to discuss the Proposed Plan at the Palisades High School, 35 Church Hill Rd, Kintnersville, Pennsylvania. Written comments, postmarked no later than February 4, 1998, should be sent to:

Remedial Project Manager
James P. Harper (3HW21)
harper.james@epa.gov
U.S. Environmental Protection Agency
1650 Arch St.
Philadelphia, PA 19103-2029
215-814-3197

Interested persons are encouraged to submit their comments on the Proposed Plan and the other documents in the Administrative Record to EPA during the public comment period. Although EPA has selected a preferred alternative, no final decision has been made. EPA may modify the Preferred Alternative, select another response action, or develop another alternative if public comment or new information presented warrants such an action. EPA, the lead agency, in consultation with the Pennsylvania Department of Environmental Protection (PADEP), the support agency, will make its final selection of a remedy for the contamination at the Site in a **Record of Decision (ROD)**.

This Proposed Plan fulfills the public notification requirements of Sections 113(k)(2)(B), 117(a), and 121(f)(1)(G) of the **Comprehensive Environmental Response, Compensation, and Liability Act of 1980**, as amended (CERCLA) 42 U.S.C. §§ 9613(k)(2)(B), 9617(a), and 9621(f)(1)(G) (also known as "Superfund").

SCOPE AND ROLE OF RESPONSE ACTIONS

The Site has been the subject of three prior and one on-going Superfund removal actions. Based on the determinations made during these removal actions EPA has divided the Site into 14 areas of investigation: 4 pond areas, 8 surface land areas, an unnamed creek, and the groundwater. The Site was the target of widespread illegal dumping of hazardous substances from 1969 until sometime in the late 1970s. Contaminants have been found in the groundwater, in the surface and subsurface soils, and buried in various locations in both metal drums and unconsolidated forms. This Proposed Plan suggests addressing the Site as one operable unit and addressing the contamination on a media specific basis.

The primary objective of the remedy described in this Proposed Plan is to reduce or eliminate the potential for human or ecological exposure to buried wastes, contaminated soil and groundwater at the Site. EPA believes the preferred cleanup alternative outlined in this Proposed Plan will comprehensively address any threat posed by the release of hazardous substances at or from the Site.

SITE BACKGROUND AND HISTORY

The Boarhead Farms Superfund Site consists of approximately 120 acres located on Lonely Cottage Road in Upper Black Eddy, Bridgeton Township, Bucks County, Pennsylvania (Figure 1). Aerial photographs indicate that the property was heavily wooded prior to 1969. In 1969, Manfred DeRewal Sr. (hereafter referred to as "Mr. DeRewal") incorporated Boarhead Corporation (BHC) and DeRewal Chemical Company (DCC). Mr. DeRewal acted as the President of both companies. BHC purchased the Site in 1969 and remains the current legal owner. According to Mr. DeRewal, DCC was a chemical and waste hauling company which established its office at the Boarhead Site. Keystone Excavation Company also leased a portion of the Site for its operations.

Illegal dumping has occurred on the Site since the property was purchased by Mr. DeRewal and BHC. There have been numerous reports and findings of spills, fish kills, and offensive odors emanating from the Site. Some of the reports were investigated by the Bucks County Department of Health (BCDOH), the Pennsylvania State Police, and the Pennsylvania Department of Environmental Resources (PADEP), now known as the Pennsylvania Department of Environmental Protection (PADEP). Notes and formal memoranda from these inspections indicate that tank trucks, vats, barrels, and other containers containing hazardous substances were stored at the Site. Inspection reports from the 1970s refer to drum burial, releases of hazardous wastes and the presence of lagoons and other standing liquids. Many of the objects

and conditions noted in the county and state inspections were confirmed by aerial photographs of the Site in the 1970s.

During the mid 1970s, PADER was active in working with Mr. DeRewal in attempting to eliminate the wastes being brought to the Site. PADER issued at least one administrative order, and entered into numerous negotiations with Mr. DeRewal and BHC in an attempt to resolve the ongoing waste dumping at the Site. However, after numerous inspections yielded further evidence of hazardous waste disposal and spills, it was apparent that no further effort had been made by Mr. DeRewal or BHC to correct the pollution problem at the Site.

A site inspection (SI) was conducted in May 1984, and a final SI report was issued by EPA on January 20, 1986. A **Hazardous Ranking System (HRS)** report was issued by EPA on September 4, 1987; the HRS score for the Site was 39.9, greater than the 28.5 minimum necessary for inclusion on the **National Priorities List (NPL)**.

Based on information and data collected by PADEP and EPA from 1971 through 1988, EPA proposed to include the Site on the NPL on June 24, 1988, and subsequently placed the Site on the list on March 31, 1989. The Remedial Investigation Report for the Site began on December 5, 1989. It showed that large scale dumping of bulk hazardous wastes and drummed materials as well as burial of hazardous substances had taken place in various locations of the Site.

EPA mobilized on the Site on June 18, 1992 and conducted two Superfund removal actions. These involved locating, excavating and disposing of over 2500 buried drums throughout the Site. The excavated areas were then covered with a layer of clean fill to reduce exposure risk. Removal of the drums greatly reduced the contaminant levels in the subsurface soils throughout the Site. A third removal action was performed by General Ceramics, Inc. (GCI) pursuant to an Administrative Order by Consent dated December 11, 1992 (EPA Docket no. III-92-66-DC). GCI excavated and removed drums and soils contaminated with radioactive wastes. EPA has determined that all known radioactive waste has been removed from the Site.

A fourth removal action to intercept, collect, and treat contaminated groundwater in an onsite treatment facility and provide nearby residents with home well treatment systems is continuing at this time (Figure 3). The interceptor trench is approximately 1300 feet long and is located downgradient from the high VOC and metal concentration areas. The trench intercepts the shallow groundwater flowing through the Site and pumps it to an onsite treatment facility. The VOCs are then removed and the clean water is discharged to an onsite wetland area. In addition, affected residential wells have been equipped with granular activated carbon (GAC) filters.

The Ecological Risk Assessment was completed in September 1995. A follow-up site specific bioassay study was performed in July 1996. The Baseline Risk Assessment (BLRA) was completed in September 1995. Based on these documents, a Feasibility Study (FS) was prepared in July 1997 describing the remedial action objectives and comparing cleanup alternatives for the Site. The findings of these reports are summarized below.

NATURE AND EXTENT OF CONTAMINATION

Air Quality: Air contamination was not found to be an issue at the Site. No contaminants were found in the air that exceeded the surrounding background levels.

Surface Soil Contamination: The surface soils were sampled on a regularly spaced grid pattern throughout the Site. Contaminants measured at concentrations which pose a risk to human health and the surrounding area are as follows:

- Inorganic contaminants of concern include arsenic, beryllium, cadmium, chromium, copper, and thallium.
- Volatile Organic Compounds (VOCs) were detected in areas associated with former drum burial, and include methyl isobutyl ketone (MIBK), trichloroethene (TCE), xylenes, 1,1,1-trichloroethane (TCA), cis-1,2-dichloroethene (cis-1,2-DCE), ethylbenzene, tetrachloroethene(PCE), benzene,

acetone, styrene, and toluene.

- The **Semi-Volatile Organic Compound (SVOC)** bis(2-ethylhexyl)phthalate was detected in various areas throughout the Site.

Subsurface Soil Contamination: Subsurface soil samples were collected to evaluate the nature and extent of contamination around the drum burial areas in the open fields (Areas 1, 5, and 6 on Figure 2) and wetlands. Concentrations were evaluated through fate-and-transport modeling. Distribution of the contaminants does not suggest a continuous area of contamination, but rather suggests the presence of smaller "hot spots." A summary of the results is given below:

- PRGs (Preliminary Remediation Goals) were exceeded in various combinations for beryllium, cadmium, lead, PCE, benzene, 1,1,1-TCA, bis(2-ethylhexyl)phthalate, toluene, and TCE in most open field areas (Figure 2).
- Concentrations of TCE, benzene, and other VOCs indicate the presence of non-aqueous phase liquids (NAPLs) in the area near the farmhouse (Figure 2). The highest concentrations of cadmium and lead were also found in this area, with concentrations of cadmium exceeding 100 times the PRG, and those of lead yielding twice the PRG.
- The wooded wetland area (Figure 2) was found to contain high levels of PCE, TCE, 1,1,1-TCA, and cadmium.

Surface Water Contamination: Surface water samples were collected from the four onsite ponds, two onsite wetland areas, and the unnamed creek, and were compared with those from an offsite pond, wetland, and creek to determine background concentrations. Human health RBCs (Risk Based Concentrations) were not exceeded in the samples collected from the onsite ponds. RBCs for manganese and chromium were exceeded in Wetland Area 12 (Figure 2), however they pose no risk to human health based on the Site-specific BLRA. Manganese was detected in three culverts that drain Wetland Area 12. Low levels of VOCs were found in the wetland areas downgradient from the former drum burial areas.

Sediment: Sediment samples were collected from the onsite ponds, wetlands, creeks and culverts. The RBCs for arsenic, beryllium, chromium, and nickel were exceeded in the onsite ponds. Elevated levels of 1,1,1-TCA, 1,1-DCA, 1,2-DCE, toluene, vinyl chloride, xylenes, and TCE were also detected. Elevated levels of chromium and low levels of various VOCs were detected in a small portion of the wetlands. Low levels of pesticides were detected in sediment samples from the creeks and culverts.

Groundwater contamination: Groundwater quality was investigated for both the shallow and intermediate groundwater systems. The data indicate that there is little connection between the two. The contamination in the intermediate system is from movement through fracture flow. The deep groundwater system was not sampled due to the relatively unfractured underlying bedrock. A summary of the findings is given below:

- Wells in the shallow groundwater system in the wooded uplands (Figure 2) showed concentrations exceeding the **Maximum Contaminant Levels (MCLs)** for both PCE and TCE.
- Wells in the shallow groundwater system in the wooded wetlands (Figure 2) exceeded MCLs for chromium, TCE, and nickel. Low levels of VOCs were also detected.
- Seventeen contaminants were found in the shallow groundwater system in Area 1 (Figure 2) including chromium, lead, nickel, thallium, 1,1,1-TCA, 1,1,2-TCA, 1,1-DCE, 1,2-dichlorobenzene, 1,2-DCA, 1,2-DCE, 1,2-DCP, benzene, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, and vinyl chloride. The most contaminated well in Area 1 is near the area where **DNAPL (Dense nonaqueous phase liquid)** TCE has been detected.
- Twelve contaminants were detected and exceeded the MCLs in the shallow groundwater system in the area of the farmhouse (Area 2, Figure 2). These included antimony, cadmium, chromium, lead, manganese, nickel, thallium, 1,2-DCA, 1,2-DCP, benzene, cis-1,2-DCE, and vinyl chloride.
- Twenty two contaminants exceeded MCLs in open field areas (Areas 5 and 6, Figure 2). These included beryllium, cadmium, chromium, lead, manganese, nickel, bch-alpha, bch-gamma, nitrobenzene, 1,1,1-TCA, 1,1,2-TCA, 1,1-DCE, 1,2-DCA, MIBK, benzene, carbon tetrachloride, cis-1,2-DCE, ethylbenzene, methylene chloride, PCE, TCE, and vinyl chloride. The levels detected coincide with the highly contaminated subsurface soils located in these areas.
- Chromium, nickel, carbon disulfide, cis-1,2-DCE, lead, 1,1,2-TCA, TCE, 1,1-DCE, and PCE were detected in the intermediate groundwater system in various areas of the Site.
- Twenty two residential wells in the Site vicinity exceeded MCLs for at least one contaminant. Bis(2-

ethylhexyl)phthalate was the organic compound detected most often. The inorganic compounds that were detected included: antimony, chromium, thallium, nickel, cadmium, and lead.

Hot Spots: Three areas of particular concern, where NAPLs (Non-Aqueous Phase Liquids) are suspected have been identified. A summary of each area follows:

- * Hot Spot 1 is an area where excavation of contaminated drums occurred during the removal activities. High levels of PCE, TCE, 1,1,1-TCA were detected in the soil following drum removal. VOCs were also detected with concentrations increasing with depth. Groundwater from the area showed high levels of TCE, 1,1,1-TCA, cis-1,2-DCE, 1,2-DCA, and vinyl chloride.
- * Hot Spot 2, located to the south of the farmhouse, yielded high levels of benzene in soil samples, increasing with depth. Benzene was also found in the groundwater with concentrations up to 300,000 mg/L (micrograms per liter).
- * Hot Spot 3 is located northwest of the farmhouse and showed high concentrations of TCE, 1,1,1-TCA, cis-1,2-DCE, and PCE in the soil.

Buried Drums: In 1992 and 1993 more than 2500 drums were excavated from the open field areas (Areas 5 and 6, Figure 2). After these removal actions, a magnetometer survey was conducted and remaining subsurface anomalies were identified. The survey yielded evidence of remaining crushed, empty, and/or intact drums.

Although contamination has been found throughout the Site, the previous removal actions have significantly reduced the contaminant levels. Excavation and disposal of the majority of the buried drums reduced the amount of contaminants leaching into the soil and groundwater. The interceptor trench and onsite treatment facility also remove a significant amount of contaminants from the groundwater. Clean fill placed over the drum removal excavation areas has provided protection from any direct contact risk to humans.

SUMMARY OF SITE RISKS

Following the Remedial Investigation, EPA conducted an analysis to evaluate the human health and environmental hazards that could result if no remedial action were taken at the Site. These analyses are commonly referred to as Risk Assessments and identify existing and future risks that could occur if conditions at the Site do not change. The Baseline Human Health Risk Assessment (BLRA) evaluated human health risks and the Ecological Risk Assessment (ERA) evaluated environmental impacts from the Site.

Baseline Human Health Risk Assessment: The BLRA assesses the toxicity, or degree of hazard, posed by contaminants at the Site, and describes the routes by which humans could come into contact with these contaminants. Separate calculations are made for those substances that can cause cancer (carcinogenic) and for those that can cause non-carcinogenic, yet still adverse health effects.

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) established acceptable levels of carcinogenic risk for Superfund sites ranging from one excess cancer case per 10,000 people exposed, to one excess cancer case per one million people exposed. This translates to a risk range of between one in 10,000 and one in one million additional human cancer cases. Expressed as scientific notation, this risk range is between 1.0E-04 and 1.0E-06. Remedial action is warranted at a site when the calculated cancer risk level exceeds 1.0E-04. However, since EPA's cleanup goal is generally to reduce the risk to 1.0E-06 or less, EPA also may take action where the risk is within the range between 1.0E-04 and 1.0E-06.

The NCP also states that sites should not pose a health threat due to a non-carcinogenic, but otherwise hazardous condition. EPA defines a non-carcinogenic threat by the ratio of the contaminant concentration at the Site that a person may encounter to the established safe concentration. If the ratio, call the **Hazard Index (HI)**, exceeds one (1.0), there may be concern for the potential non-carcinogenic health effects associated with exposure to the contaminants at the Site. The HI identifies the potential for the most sensitive individuals to be adversely affected by the noncarcinogenic effects of chemicals. As a rule, the greater the value of the HI above 1.0, the greater the level of concern.

Based on the results of the Remedial Investigation the estimated risks for current use exceed the acceptable limits for groundwater exposure and recreational use of the surficial waters both onsite and offsite. Contamination of the shallow groundwater by VOCs (primarily PCE, TCE, 1,1-DCE, vinyl chloride, benzene, and toluene) and metals (arsenic, chromium, and manganese) contribute to the most unacceptable levels of risk.

Human health risks to residences downgradient of the Site were evaluated for the pathways of ingestion, dermal contact, and inhalation. Risks in the 17 of the 26 residential wells evaluated yielded hazard indices greater than one or carcinogenic risks greater than 100 in a million. These risks are currently being addressed with the installation and maintenance of carbon filters in each affected residence.

The following groups of individuals could be exposed to Site contaminants either at the present time or in the future and were evaluated in the BLRA:

- * onsite residents consuming groundwater from residential wells
- * offsite residents consuming groundwater from the Site
- * onsite workers consuming groundwater from the Site
- * recreational onsite users in wetland areas
- * recreational offsite users consuming fish from the culvert or creek

Individuals could potentially be exposed to Site contaminants in various ways. The exposure routes evaluated in the BLRA include:

- * drinking, breathing while showering, and direct skin contact with groundwater and surface water
- * placing objects such as hands contaminated with Site soil and sediment in the mouth
- * eating fish from the onsite ponds or offsite culvert and creek

The previous removal actions have reduced the risk of exposure. The continuous treatment of groundwater in the onsite treatment facility has further reduced the risk to offsite residents and onsite workers consuming groundwater from the Site. The removal actions have also reduced the risk to recreational users of the wetlands, culverts, and creeks. The removal of contaminated drums and associated soils, along with the clean fill placed on those areas, has eliminated the direct contact risk onsite.

Different combinations of the above routes of exposure were considered for various groups of individuals that could be exposed to Site contaminants. Table 1 below summarizes the total risk levels from all appropriate exposure routes calculated for each group of individuals.

Table 1: Human Health Risks at the Boarhead Farms Site

Group of Individuals	Maximum Cancer Risk	Maximum Hazard Index
Onsite residents consuming groundwater from onsite residential well	1.3E-03	52
Onsite residents consuming most contaminated groundwater onsite	3.5E-01	17,000
Onsite residents on public water supply	4.1E-05	0.24
Offsite residents consuming groundwater downgradient from Site	5.0E-04	7.6
Onsite workers consuming most contaminated groundwater onsite	3.3E-02	1,800
Onsite workers on public water supply	4.3E-06	0.00056
Recreational Site users-wooded upland areas	8.40E-09	0.0083

Recreational Site users-wetlands	1.4E-06	2.0
Recreational Site users-ponds	3.5E-06	0.14
Recreational Site users-pond fish ingestion	NA	0.059
Recreational offsite users-culvert and creek	1.3E-06	0.032
Recreational offsite users-culvert and creek fish ingestion	5.8E-05	2.3

Actual or threatened releases of hazardous substances from this Site, if not addressed by EPA's preferred alternative or one of the other cleanup alternatives considered, may present a current or potential threat to public health, welfare, or the environment.

Ecological Risk Assessment: Ecological conditions at the Site were characterized by performing field investigations. Data was collected and analyzed and then compared with published data and reports. The evaluated resources associated with the Site include wetlands, vegetation, wildlife, and wildlife habitat. Concentrations of contaminants in the surface water do not pose a significant threat. Bioassay tests were performed for surface soil and sediments and indicate that the presence of contaminants at the Site do not pose a threat to the ecological resources.

SUMMARY OF ALTERNATIVES

The Feasibility Study discusses the full range of alternatives evaluated for the Site and provides supporting information relating to the alternatives in this Proposed Plan. This Proposed Plan discusses a "No Action" alternative as required by the NCP and five other alternatives that are determined by EPA to be protective of human health and the environment, achieve state and federal regulatory requirements, and best achieve the cleanup goals for the Site. These alternatives are derived from those presented in the Feasibility Study. Reviewers are encouraged to comment on the additional alternatives presented in the Feasibility Study as well as those included in this Proposed Plan.

Alternative 1: No Action

Capital Cost

\$0

Total Present Worth Cost

\$940,000

Operation & Maintenance (O&M)(30 yr)

\$60,900/yr

The NCP requires that EPA consider a "No Action" alternative for every Superfund Site to establish a baseline or reference point against which each of the remedial action alternatives are compared. In the event that the other identified alternatives do not offer substantial benefits in the reduction of toxicity, mobility, or volume of the constituents of concern, the No Action alternative may be considered a feasible approach. This alternative leaves the Site in the current condition and all current and potential future risks would remain. The cost for the "No Action" alternative is required to maintain the existing interceptor trench and groundwater treatment facility.

Alternative 2: Institutional Controls, Monitoring, and Residential Water Treatment

Capital Cost

\$960,000

Total Present Worth Cost

\$3,000,000

Operation & Maintenance (O&M)(30 yr)

\$130,000

Institutional controls would be implemented to restrict land and groundwater use at the Site in order to reduce the potential for human exposure to contamination. Fencing and deed restrictions would be required to eliminate the possibility of future residential development and/or use of groundwater at the Site. Land use controls may also be implemented. Techniques available to limit access to contaminated groundwater include deed restrictions preventing access to the land overlying the contaminated groundwater and legislating a groundwater-use restriction on the property overlying the contamination. In addition, surface grading would be added to promote surface runoff. Since contaminated media would be left onsite, a review of Site conditions would be required every five years. Each review would involve site sampling, inspections, data evaluation and a summary report.

Alternative 3: Soil Excavation, Multilayer Cap; Excavation and Offsite Disposal of Buried Drums; Groundwater Extraction, Metals Precipitation, and Air Stripping; Institutional Controls and Monitoring; and Residential Water Treatment

Capital Cost

\$5,200,000

Total Present Worth Cost

\$11,690,000

Operation & Maintenance (O&M)(30 yr)

\$420,000

This alternative combines excavating contaminated soil and buried drums with offsite disposal and capping of the contaminated central area (Areas 5 and 6). The contaminated soil would be moved from outlying areas to the central area where a geomembrane cap would be constructed, surrounded by perimeter fencing. In addition, 21 extraction wells would be installed to transfer groundwater to the existing onsite treatment facility. The groundwater treatment facility would be augmented to accommodate the larger volume of treatable groundwater by adding a vapor-phase carbon unit for off-gas treatment as well as a metals precipitation unit. Institutional controls as listed in Alternative 2 would also apply, as well as an annual O&M program to maintain the groundwater treatment system.

Alternative 4: Soil Excavation and Stabilization/Solidification; Excavation and Offsite Disposal of Buried Drums; Groundwater Extraction, Metals Precipitation, and UV Oxidation; Institutional Controls and Monitoring; and Residential Water Treatment

Capital Cost

\$10,770,000

Total Present Worth Cost

\$21,580,000

Operation & Maintenance (O&M)(30 yr)

\$700,000

This alternative combines stabilization/solidification of contaminated soils, offsite disposal of buried drums, groundwater extraction, metals precipitation, and UV Oxidation with the institutional controls and monitoring and residential water treatment described in Alternative 2.

The contaminated soils from the outlying areas would be excavated, stabilized and moved to the central area. The central area would also be stabilized and solidified down to the top of the bedrock. Clean soil would be used to cover the stabilized soil as well as for backfilling the excavated areas. The existing groundwater treatment facility would be modified by replacing the current air stripper with a UV oxidation unit and adding a metals precipitation unit. The remaining buried drums would be excavated and disposed of offsite and extraction wells would be installed for further groundwater treatment.

Alternative 5: Excavation of Soil and Placement in Onsite Landfill; Excavation and Offsite Disposal of Buried Drums; Groundwater Extraction, Metals Precipitation, and Air Stripping; Institutional Controls and Monitoring; and Residential Water Treatment

Capital Cost

\$6,890,000

Total Present Worth Cost

\$13,090,000

Operation & Maintenance (O&M)(30 yr)

\$400,000

This alternative combines the construction of an onsite landfill with the drum excavation and offsite disposal, groundwater extraction, metals precipitation, air stripping, institutional controls and monitoring, and residential well treatment described in the above alternatives.

The landfill would be a RCRA Subtitle C landfill positioned in the central area. Outlying contaminated soils as well as the soils in the central area would be excavated and placed into the landfill. The landfill would be capped with a RCRA cap, a security fence would be installed and an O&M procedure would be implemented. The leachate from the landfill would be directed to the existing onsite treatment plant.

Alternative 6: Soil Aeration and Treatment of VOC Hot Spots; Excavation and Offsite Disposal of Buried Drums; Groundwater Extraction, Metals Precipitation, and Air Stripping; Institutional Controls and Monitoring; and Residential Water Treatment

Capital Cost

\$7,180,100

Total Present Worth Cost

\$13,157,000

Operation & Maintenance (O&M)(30 yr)

\$463,900

This alternative uses aeration of soil hot spots contaminated with high concentrations of VOCs in combination with the offsite disposal of buried drums, groundwater extraction, metals precipitation, air stripping, institutional controls and monitoring, and residential water treatment as described in the above alternatives.

The soils from the hot spot areas containing high levels of VOCs (primarily TCE and benzene) would be collected and mechanically aerated to remove the VOC contaminants in a temporary containment building constructed onsite. The building would be equipped with dust and carbon filtration units for air treatment. The water that refills the excavated TCE area would be pumped to the existing treatment system or air sparged. The clean soils would be used as fill for the excavated areas or placed elsewhere onsite.

COMPARATIVE EVALUATION OF ALTERNATIVES

Each of the six (6) remedial alternatives summarized in this Proposed Plan has been evaluated with respect to the nine (9) evaluation criteria set forth in the NCP, 40 C.F.R. Section 300.430 (e)(9). These nine criteria can be categorized into three groups: threshold criteria, primary balancing criteria, and modifying criteria. A description of the evaluation criteria is presented below:

Threshold Criteria:

1. Overall Protection of Human Health and the Environment addresses whether a remedy provides adequate protection, both short-term and long-term, and describes how risks are eliminated, reduced, or controlled.

2. Compliance with **Applicable or Relevant and Appropriate Requirements** (ARARs) addresses whether a remedy will meet all of the applicable, or relevant and appropriate requirements of federal environmental laws, as well as state environmental or facility siting laws.

Primary Balancing Criteria:

- 3. Long-term Effectiveness and Permanence refers to the ability of a remedy to maintain reliable protection of human health and the environment over time once cleanup goals are achieved. In addition, it examines the degree of certainty that the alternative will prove successful.
- 4. Reduction of Toxicity, Mobility, or Volume through Treatment addresses the degree to which an alternative employs recycling or treatment that reduces toxicity, mobility, or volume of contaminants.
- 5. Short-term Effectiveness addresses the period of time needed to achieve protection and any adverse impacts on human health and environment that may be posed during the construction and implementation of the alternative.
- 6. Implementability addresses the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular alternative.
- 7. Cost refers to an evaluation of the types of costs that will be incurred with respect to a particular alternative. The following are estimated: capital costs including direct and indirect costs, annual operation and maintenance costs, and net present value of capital and O&M costs.

Modifying Criteria:

- 8. State Acceptance indicates whether, based on its review of backup documents and the Proposed Plan, the State concurs with, opposes, or has no comment on the preferred alternative.
- 9. Community Acceptance will be assessed in the Record of Decision following a review of public comments received on the Proposed Plan and supporting documents included in the Administrative Record.

1. Overall Protection of Human Health and the Environment

A primary requirement of CERCLA is that the selected remedial alternative be protective of human health and the environment. A remedy is protective if it reduces current and potential risks to acceptable levels under the established risk range posed by each exposure pathway at the Site.

The No Action alternative (Alternative 1) would not effectively protect human health and the environment. Although VOCs in the groundwater are treated, system capacity is likely inadequate, air emissions are generated, inorganics are not reduced, and contaminants will migrate offsite. Alternative 2 is similar to the No Action alternative, except MCLs for the residential water supply are met.

Alternatives 3, 4, 5, and 6 are all protective of human health and the environment. All four alternatives provide for an upgrade of the existing groundwater treatment facility with the addition of a metals precipitation unit and methods for further treatment of VOCs. Each of the four alternatives also reduces the risk of exposure. Under Alternative 3 the wastes remain on site, but installation of the cap will minimize infiltration and leaching through the contaminated soil above the groundwater table. Under Alternative 4, soil stabilization and solidification would occur, preventing further leaching altogether. Alternative 5 would protect human health and the environment through containing the contaminated soils and hot spots in an onsite landfill. The landfill would minimize infiltration and leaching, as well as restrict access to contaminated soils. Alternative 6 is protective through largely eliminating organic contaminants from the hot spot areas, in turn reducing the possibility of the organics leaching into the groundwater.

With the inclusion of institutional controls, monitoring, and continued excavation and removal of buried drums, each of the Alternatives 3, 4, 5, and 6 would reduce the possibility of further exposure to contaminated soils, further consumption of contaminated groundwater, and further ingestion of contaminated fish from the culverts and creeks.

2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARS) *

* Under Section 121(d) of CERCLA, 42 U.S.C. § 9621 (d), and EPA guidance, remedial actions at CERCLA sites must attain legally applicable or relevant and appropriate federal and promulgated state environmental standards, requirements, criteria and limitations which are collectively referred to as "ARARS," unless such ARARS are waived under Section 121(d)(4) of CERCLA, 42 U.S.C. § 9621(d) (4).

Any cleanup alternative considered by EPA must comply with all applicable or relevant and appropriate federal and state environmental requirements. **Applicable** requirements are those substantive environmental standards, requirements, criteria, or limitations promulgated under federal or state law that are legally applicable to the remedial action to be implemented at the Site. **Relevant and appropriate** requirements, while not being directly applicable, address problems or situations sufficiently similar to those encountered at the Site that their use is well-suited to the particular site.

Chemical-Specific ARARS

Alternatives 3, 4, 5, and 6 would satisfy treatment effluent discharge requirements and air emission limits for organic and inorganic pollutants. These alternatives would also meet MCL levels at residential wells. Alternatives 1 and 2 would not meet these requirements.

Action-Specific ARARS

Capping and landfilling in Alternatives 3 and 5 trigger the substantive requirements of the Resource Conservation and Recovery Act (RCRA) treatment, storage and disposal (TSD) ARARS, such as design, operating, closure, and post closure of a RCRA landfill, since contaminants would remain in place.

Alternatives 3, 4, 5, and 6 (to a lesser extent) may disturb wetlands. If wetlands are disturbed, restoration measures will be performed.

Offsite disposal of contaminated soils in Alternatives 3 and 4 trigger RCRA hazardous waste ARARS during excavation activities. These requirements include storage time limits, manifesting, and transporting requirements. In addition, Alternatives 3 and 5 may require that the Site be designated a corrective action management unit (CAMU) to avoid invoking RCRA's land disposal restrictions (LDRs).

During the 30 year remedial period, treatment of inorganics in onsite groundwater (Alternatives 3 through 6) and treatment of off-gas (Alternatives 3, 5, and 6) will require offsite disposal, proper manifesting, and tracking to ensure that waste arrives at a permitted facility.

Location-Specific ARARS

Alternatives 3, 4, and 5 require earthmoving activities within culturally sensitive areas onsite. These areas include those around the farmhouse and onsite ponds. Alternative 2 may also trigger similar ARARS depending on the extent of surface control activities.

3. Long-Term Effectiveness and Permanence

Magnitude of Residual Risk

Alternatives 1 and 2 would provide no additional measures to control residual contaminants, however, Alternative 2 would reduce the risk to exposure. Alternatives 4 and 5 would provide more expedient

control of residual risk since the soil contamination would be immediately stabilized or encapsulated to minimize leaching. Alternative 3, which provides a cap over the central area, would allow contaminants underneath the cap to desorb into the groundwater and leave residual contamination in the soil above the water table. Alternative 6 would reduce residual risk in the hot spot areas since the soil would be removed and treated, thus minimizing leaching.

Adequacy and Reliability of Controls

Alternative 3, 4, 5, and 6 offer equally reliable groundwater treatment processes capable of removing contaminants in the influent stream. For contaminated soils, Alternative 3 is reliable only for minimizing surface water infiltration and resulting contaminant desorption. Alternatives 4 and 5, using soil solidification/stabilization and landfilling are the most reliable since they prevent leaching effects and provide groundwater protection. Alternative 6, soil aeration, is reliable although it is only provided for at hot spots. Alternatives 3, 4, and 5 provide for perimeter extraction wells, reliable for controlling contaminant migration offsite.

4. Reduction of Toxicity, Mobility, or Volume through Treatment

Section 121(b) of CERCLA, 42 U.S.C. Section 9621(b), establishes a preference for remedial actions which include treatment that permanently and significantly reduces the toxicity, mobility, or volume of contaminants. Alternative 1 would provide for some reduction in toxicity, mobility, and volume through organic pollutants being treated in the current groundwater treatment facility. Alternative 2 would not affect volume of onsite contamination, but would reduce toxicity if the existing onsite treatment facility is maintained properly. Surface controls may control mobility in the short term.

Toxicity, mobility, and volume reduction is not achieved by capping in Alternative 3 since the contaminants in the soil would not be fully isolated. The contaminants would still leach into the groundwater over time until reaching the trench system or extractions wells. The volume of potential hazardous wastes excavated during the remedial action and annual O&M for this alternative is higher compared to that of Alternatives 4 and 5.

The onsite landfill in Alternative 5 would not require transport of hazardous wastes offsite during excavation activities, however, offsite transport would be required during O&M. Alternative 4 generates less waste through organic treatment than Alternatives 3, 5, and 6 since GAC is not used in the treatment system. Alternative 6 would reduce the volume and toxicity of organic contaminants in select hot spots only.

5. Short-Term Effectiveness

Alternative 2 would be effective for protection from immediate exposure via contact with surface soil. Alternatives 3, 4, 5, and 6 are equally effective in the short-term. Alternatives 3, 5, and 6 have the greatest risk of exposure during construction since contaminated soil is excavated. Alternative 4 includes both *in situ* and *ex situ* solidification/stabilization so only a fraction of the soil requires excavation.

6. Implementability

All treatment processes described are technically implementable. Alternatives 3, 4, 5, and 6 require treatability studies and specialty contractors for items such as capping, stabilization, and soil aeration. All alternatives require five year site reviews.

Since UV oxidation in Alternative 4 does not generate air emissions, implementation of carbon filter units and associated maintenance is not required. Alternative 4 requires more effort to implement due to the volume of soil that is excavated, treated chemically, and relocated. Design, construction, and operation of the landfill (Alternative 5) requires a high level of effort to implement and needs long-term O&M.

7. Cost

Evaluation of costs of each alternative generally includes the calculation of direct and indirect capital costs and the annual operation and maintenance (O&M) costs, both calculated on a present worth basis. The total present worth cost of all Alternatives has been calculated for comparative purposes and is presented in Table 2.

Table 2: Estimated Cost of Alternatives

Alternative	Total Present Worth Cost
1	\$940,000
2	\$3,000,000
3	\$11,690,000
4	\$21,580,000
5	\$13,090,000
6	\$13,157,000

Direct capital costs include costs of construction, equipment, building and services, and waste disposal. Indirect capital costs include engineering expenses, start-up and shutdown, and contingency allowances. Annual O&M costs include labor and material; chemicals, energy, and fuel; administrative costs and purchased services; monitoring costs; cost for periodic site review (every five years); and insurance, taxes, and license costs. For cost estimation purposes, a period of 30 years has been used for O&M. In reality, maintenance of a multilayer cap on a landfill would be expected to continue beyond this period. Similarly, the actual duration of operation for the groundwater extraction and treatment system would depend on the ability to successfully limit off-site migration of Site-related contaminants. The actual cost for each alternative is expected to be in a range from 50 percent (50%) higher than the costs estimated to 25 percent (25%) lower than the costs estimated. The evaluation was based on the FS cost estimates as modified by EPA.

8. State Acceptance

The Commonwealth of Pennsylvania is currently reviewing this Proposed Plan. PADEP has reviewed the supporting documents and provided support to EPA throughout the Superfund process at this Site.

9. Community Acceptance

Community acceptance of the preferred alternative will be evaluated after the public comment period on the Proposed Plan ends, and will be discussed in the "Responsiveness Summary" of the Record of Decision for the Site.

PREFERRED REMEDIAL ALTERNATIVE

Based on the comparison of the nine evaluation criteria for each of the alternatives in this Proposed Plan, EPA's preferred alternative is Alternative 6: Soil Aeration and Treatment of VOC Hot Spots; Excavation and Offsite Disposal of Buried Drums; Groundwater Extraction, Metals Precipitation, and Air Stripping; Institutional Controls and Monitoring; and Residential Water Treatment. Alternative 6 meets the threshold criteria of overall protection of human health and the environment and compliance with ARARs. In considering the balancing criteria, EPA believes Alternative 6 can be readily implemented, achieves long-term effectiveness at a reasonable cost, minimizes the short-term impacts, and effectively reduces the toxicity, mobility, and volume of Site contaminants through both engineering controls and treatment.

THE ROLE OF COMMUNITY IN THE SELECTION PROCESS

This Proposed Plan is being distributed to solicit public comment on the appropriate cleanup action for the Site. EPA relies on public input so that the remedy selected for each Superfund Site meets the needs and

concerns of the local community. EPA is providing a 30-day public comment period beginning on January 5, 1998 and ending on February 4, 1998 to encourage public participation in the selection process. EPA will conduct a public meeting during the comment period in order to present the Proposed Plan and supporting information, answer questions, and accept both oral and written comments from the public. The public meeting will be held on January 14, 1998 at 7:00 PM at the Palisades High School, 35 Church Hill Rd, Kintnersville, Pennsylvania. EPA will summarize and respond to comments received at the public meeting and written comments post-marked by February 4, 1998 in the Responsiveness Summary section of the Record of Decision, which documents EPA's final selection for cleanup at the Site. To obtain additional information relating to this Proposed Plan, please contact either of the following EPA representatives:

Carrie Deitzel
 Community Relations Coordinator
 U.S. EPA Region 3
 1650 Arch St.
 Philadelphia, PA 19103-2029
 215-814-5525
deitzel.carrie@epa.gov

James P. Harper
 Remedial Project Manager
 U.S. EPA Region 3
 1650 Arch St.
 Philadelphia, PA 19103-2029
 215-814-3197
harper.james@epa.gov

GLOSSARY

Administrative Record

An official compilation of documents, data, reports, and other information that was considered or relied upon in an Agency's decision making process. In the case of a Superfund site, the Administrative Record is developed to support the Agency's selection of a final remedy for the site. The record is maintained at EPA's offices and placed in the information repository to allow public access to the material.

Applicable, Relevant, and Appropriate Requirements (ARARs)

Applicable requirements are those clean-up standards under Federal or State law that specifically address a hazardous substance, pollutant, remedial action, or other circumstance at a CERCLA site. Relevant and appropriate requirements are those same standards mentioned above that while not "applicable" at the CERCLA site, address problems or situations sufficiently similar to those encountered at the site, and have a use well suited to the particular site.

Baseline Risk Assessment (BLRA)

The qualitative and quantitative evaluation performed in an effort to define the risk posed to human health and/or the environment by the presence or the potential presence of specific pollutants.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

A federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). The Act created a Trust fund, known as Superfund, to investigate and clean up abandoned or uncontrolled hazardous waste sites.

Dense Non-Aqueous Phase Liquids (DNAPLs)

Contaminants which do not readily dissolve in and are heavier than water. DNAPLs sink in the aquifer and act as a continuing source of groundwater contamination.

Ecological Risk Assessment (ERA)

An evaluation performed to determine potential risk or harm to ecological resources from exposure to contaminants at a Superfund site.

Feasibility Study

Analysis of the practicability of the potential cleanup alternatives.

Groundwater

Water found beneath the earth's surface that fills pores between soil, sand, and gravel particles to the point of saturation. Ground water often flows more slowly than surface water. When it occurs in sufficient quantity, ground water can be used as a water supply.

Hazard Index (HI)

The ratio between the average daily dose of a toxicant received by a human population and the reference dose. The reference dose is an average daily lifetime dose believed to be without adverse effects in human populations.

Hazard Ranking System (HRS)

A mathematical ranking scheme that combines the potential of a release to cause hazardous situations with the severity/magnitude of these potential impacts and the number of people who may be affected.

Maximum Contaminant Levels (MCL)

Standards for drinking water set by the Federal and State laws.

National Priorities List (NPL)

EPA's list of the nation's top priority hazardous waste sites that are eligible to receive federal money for response actions under Superfund.

Parts per million (ppm)

The concentration of a contaminant in the air or water presented as the ratio of volumes.

Parts per billion (ppb)

A concentration of a contaminant in the air or water presented as the ratio of volumes.

Potentially Responsible Party (PRP)

Those identified by EPA as potentially liable under CERCLA for cleanup costs. PRPs may include generators and present or former owners/operators of certain facilities or real property where hazardous wastes have been stored, treated, or disposed of, as well as those who accepted hazardous waste for transport and selected the facility.

Record of Decision (ROD)

A legal document that describes the final remedial actions selected for a Superfund site, why the remedial actions were chosen over others, how much they will cost, and how the public responded to the Proposed Plan for cleanup at the Site.

Remedial Investigation (RI)

An in-depth study designed to gather the data necessary to determine the nature and extent of contamination at a Superfund site; establish criteria for cleaning up the site; identify preliminary alternatives for remedial actions; and support the technical and cost analyses of the alternatives. The remedial investigation is usually done with the feasibility study. Together they are referred to as the "RI/FS."

Semi-Volatile Organic Compounds (SVOCs)

Chemicals that tend not to vaporize at room temperature.

Superfund

The program operated under CERCLA and SARA that funds and carries out the EPA solid waste emergency and long-term remedial activities.

Volatile Organic Compound (VOC)

Any organic compound which participates in atmospheric photochemical reactions for those organic compounds designated by the EPA Administrator as having negligible photochemical reactivity.

EXHIBIT “4”

P.B.T.

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA

Plaintiff,
v.

CYTEC INDUSTRIES INC.,
FORD MOTOR COMPANY,
SPS TECHNOLOGIES, INC.,
TI GROUP AUTOMOTIVE SYSTEMS
CORPORATION

Defendants.

Civil Action No. 01cv6169

CONSENT DECREE

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United States v. Cytec Industries Inc., et al.
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CONSENT DECREE

I. BACKGROUND

A. The United States of America ("United States"), on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), filed a complaint in this matter pursuant to Sections 106 and 107 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §§ 9606 and 9607.

B. The United States in its complaint seeks, inter alia: (1) reimbursement of costs incurred by EPA and the Department of Justice for response actions at the Boarhead Farms Superfund Site ("Site," as defined below) in Upper Black Eddy, Bridgeton Township, Bucks County, Pennsylvania, together with accrued interest; and (2) performance of studies and response work by the defendants at the Site consistent with the National Oil and Hazardous Substances Pollution Contingency Plan 40 C.F.R. Part 300 (as amended) ("NCP").

C. In accordance with the NCP and Section 121(f)(1)(F) of CERCLA, 42 U.S.C. § 9621(f)(1)(F), EPA initially notified the Commonwealth of Pennsylvania (the "State" or "the Commonwealth") on December 30, 1997 of negotiations with potentially responsible parties ("PRPs") regarding the implementation of the remedial design and remedial action ("RD/RA") for the Site, and EPA provided the State with an opportunity to participate in such negotiations and be a party to the Consent Decree. The State declined to participate at that time. EPA subsequently entered into a Consent Decree with three PRPs for the Boarhead Farms Superfund Site ("Site" or "Boarhead Site") for a portion of the RD/RA work on April 13, 2000. That

Consent Decree (hereinafter referred to as the "OU-1 Consent Decree") was entered by the United States District Court for the Eastern District of Pennsylvania on September 28, 2000. EPA contacted the State again on August 21, 2000 to notify it of further negotiations with PRPs for implementation of the remaining RD/RA work at the Site and to provide the State with an opportunity to participate in such negotiations and be a party to this Consent Decree. The State declined the opportunity to be a party to this Consent Decree on September 25, 2000.

D. In accordance with Section 122(j)(1) of CERCLA, 42 U.S.C. § 9622(j)(1), EPA notified the United States Department of the Interior on August 24, 1992 and January 31, 1997, and the National Oceanic and Atmospheric Administration ("NOAA") on August 24, 1992, of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal trusteeship and encouraged the trustee(s) to participate in the negotiation of this Consent Decree.

E. The defendants that have entered into this Consent Decree ("Settling Defendants") do not admit any liability to the Plaintiff arising out of the transactions or occurrences alleged in the complaint, nor do they acknowledge that the release or threatened release of hazardous substances at or from the Site constitutes an imminent or substantial endangerment to the public health or welfare or the environment.

F. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on March 31, 1989, 54 Fed. Reg. 13296.

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IV. DEFINITIONS

4. Unless otherwise expressly provided herein, terms used in this Consent Decree which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Consent Decree or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.

"Consent Decree" shall mean this Decree and all appendices attached hereto (listed in Section XXIX). In the event of conflict between this Decree and any appendix, this Decree shall control.

"OU-1 Consent Decree" shall mean the consent decree and all appendices attached thereto entered by the United States District Court for the Eastern District of Pennsylvania on September 28, 2000. The OU-1 Consent Decree provides for implementation of OU-1 Activities.

"Day" shall mean a calendar day unless expressly stated to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

"Duly Authorized Representative" shall mean a person set forth or designated in accordance with the procedures set forth in 40 C.F.R. § 270.11(b).

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Review) and Section XV (Emergency Response) of this Consent Decree; (4) the costs of undertaking the periodic review set forth in Section VII (Remedy Review) or otherwise determining whether or to what extent the Work has reduced the release or threat of release at the Site; (5) the cost of enforcing the terms of this Consent Decree, including all costs incurred in connection with Dispute Resolution pursuant to Section XIX (Dispute Resolution); (6) the costs of securing access under Section IX (Access and Institutional Controls); and (7) the cost of actions taken pursuant to Section VI (Performance of the Work by Settling Defendants), Paragraph 14 of this Consent Decree.

"Owner, Operator, as Lessee of Residential Property" shall mean a person who owns, operates, manages, or leases Residential Property and who uses or allows the use of the Residential Property exclusively for residential purposes.

"PADEP" shall mean the Pennsylvania Department of Environmental Protection and any predecessor or successor departments or agencies of the State.

"Paragraph" shall mean a portion of this Consent Decree identified by an arabic numeral or an upper case letter.

"Parties" shall mean the United States and the Settling Defendants.

"Past Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States paid at or in connection with the Site through July 31, 2000, plus Interest on all such costs which has accrued pursuant to 42 U.S.C. § 9607(a) through such date.

"Performance Standards" shall mean the cleanup standards and other measures of achievement for all OU-2 Activities as defined herein and as set forth in Section X.A, B and D

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the response action not inconsistent with the NCP pursuant to Section XVI (Payments for Response Costs).

53. Nothing in the preceding Paragraph or in this Consent Decree shall be deemed to limit any authority of the United States: (a) to take all appropriate action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site; or (b) to direct or order such action, or seek an order from the Court, to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, subject to Section XXI (Covenants Not to Sue by Plaintiff).

XVI. PAYMENTS FOR RESPONSE COSTS

54. Payments for Past Response Costs

Within ninety (90) days of the effective date of this Consent Decree, Settling Defendants shall pay to EPA \$7,000,000 in payment for Past Response Costs. Payment shall be made by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice account in accordance with current EFT procedures, referencing USAO File Number 2000V00579, EPA Site/Spill ID No. 03Y2, and DOJ Case Number 90-11-2-06036-2. Payment shall be made in accordance with instructions provided to the Settling Defendants by the Financial Litigation Unit of the United States Attorney's Office for the Eastern District of Pennsylvania following lodging of the Consent Decree. Any payments received by the Department of Justice after 4:00 p.m. (Eastern Time) will be credited on the next business day. Settling Defendants shall send notice

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that such payment has been made to the United States as specified in Section XXVI (Notices and Submissions) and to the Docket Clerk (3RC00), United States Environmental Protection Agency, 1650 Arch Street, Philadelphia, PA 19103-2029. At the time of payment, Settling Defendants shall send copies of the check(s) to the United States as specified in Section XXVI (Notices and Submissions) and to the Docket Clerk (3RC00), United States Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, PA 19103-2029. The total amount to be paid by Settling Defendants pursuant to this Subparagraph 54 shall be deposited in the EPA Hazardous Substance Superfund.

55. Payments for Future Response Costs

a. Settling Defendants shall reimburse the EPA Hazardous Substance Superfund for all Future Response Costs not inconsistent with the National Contingency Plan. The United States will send Settling Defendants a bill requiring payment that includes a cost summary, setting forth direct and indirect costs incurred by EPA, DOJ, and their contractors on a periodic basis. Within fourteen (14) days after Settling Defendants receive the bill, they may make a written request to EPA for the supporting cost documentation. This supporting cost documentation shall include cost summary reports, work assignments, technical work assignment status reports, direction documents, delivery orders, and other related documents for EPA and its contractors as applicable but not including confidential business information. Settling Defendants shall make payments of all portions of Future Response Costs for which Settling Defendants have not made a written request for supporting cost documentation within forty-five (45) days of Settling Defendants' receipt of each bill requiring payment. If the

EXHIBIT “5”

Westlaw.

67 FR 3233-01
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NOTICES

DEPARTMENT OF JUSTICE

Revision to Notice of Lodging of Consent Decree Under the Comprehensive
Environmental Response, Compensation, and Liability Act Published on January 8,
2002

Wednesday, January 23, 2002

*3233 The notice previously published on January 8, 2002, is hereby revised to provide new instructions for sending comments on the proposed Consent Decree and for obtaining copies of the proposed Decree.

In accordance with the Departmental Policy, 28 CFR 50.7, and section 122(d) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), notice is hereby given that a Consent Decree in *United States v. Cytec Industries, Inc., Ford Motor Company, SPS Technologies, Inc. and TI Automotive Systems Corp.*, Civil Action No. 01-CV-6109, was lodged with the United States District Court for the Eastern District of Pennsylvania on December 6, 2001. This Consent Decree resolves certain claims of the United States' against Cytec Industries, Inc., Ford Motor Company, SPS Technologies, Inc., and TI Automotive Systems Corp. ("Settling Defendants") under sections 106 and 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. 9606 and 9607(a). The Consent Decree requires the Settling Defendants to perform remedial work at the Site consisting of all Operable Unit 2 response activities (as defined in the Decree) and to reimburse the Superfund for past response costs in the amount of \$7 million and to pay future response costs for the Boarhead Farms Superfund Site located in Bridgeton Township, Pennsylvania.

The Department of Justice will accept written comments on the proposed Consent Decree for thirty (30) days from the date of publication of this revised notice. The delivery of U.S. Postal Service regular mail has been disrupted, and comments sent by U.S. Postal Service, first-class mail are not expected to be received in a timely manner. Therefore, please address comments to Assistant Attorney General, Environmental and Natural Resources Division, Department of Justice, and send: (1) c/o Office of Regional Counsel, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, PA 19103-2029; and/or (2) by facsimile to (202) 353-0296. Each communication must refer on its face to *United States v. Cytec Industries, Inc., Ford Motor Company, SPS Technologies, Inc., and TI Automotive Systems Corp.*, DOJ # 90-11-2-06036/2.

Copies of the proposed Consent Decree may be examined at the Office of the United States Attorney, Eastern District of Pennsylvania, 615 Chestnut Street, Philadelphia, PA 19106 and at EPA Region III, 1650 Arch Street, Philadelphia, PA 19103. A copy of the proposed Consent Decree may be obtained by telefaxing a request to Tonia Fleetwood, Department of Justice Consent Decree Library, at (202) 616-6584; telephone confirmation (202) 514-1547. There is a charge for the copy (25 cents/page reproduction cost). When telefaxing your request for a copy, please mail a check payable to the "U.S. Treasury," in the amount of \$23.25 (for Decree without appendices) or \$29.00 (for Decree with appendices) to: Consent Decree Library, U.S. Department of Justice, c/o U.S. Environmental Protection Agency, Region III, 1560 Arch Street, Philadelphia, PA 19103-2029. The check must refer to *United States v. Cytec Industries, Inc., Ford Motor Company, SPS Technologies, Inc., and TI Automotive Systems Corp.*, DOJ No. 90-11-2-06036/2.

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(Cite as: 67 FR 3233)

Page 2

Robert Brook,

Assistant Chief, Environmental Enforcement Section, Environment and Natural Resources Division, U.S.
Department of Justice.

[FR Doc. 02-1561 Filed 1-22-02; 8:45 am]

BILLING CODE 4410-15-M

67 FR 3233-01, 2002 WL 80811 (F.R.)

END OF DOCUMENT

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EXHIBIT “6”

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

<p>UNITED STATES OF AMERICA</p> <p style="text-align: center; padding-top: 20px;">Plaintiff,</p> <p style="text-align: center; padding-top: 10px;">v.</p> <p>CYTEC INDUSTRIES, INC., FORD MOTOR COMPANY, SPS TECHNOLOGIES, INC.</p> <p style="text-align: center; padding-top: 20px;">Defendants.</p>	<p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p>	<p>Civil Action No.</p>
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C. In accordance with the NCP and Section 121(f)(1)(F) of CERCLA, 42 U.S.C. § 9621(f)(1)(F), EPA notified the Commonwealth of Pennsylvania (the "State") on December 30, 1997 of negotiations with potentially responsible parties regarding the implementation of the remedial design and remedial action for the Site, and EPA has provided the State with an opportunity to participate in such negotiations and be a party to this Consent Decree.

D. In accordance with Section 122(j)(1) of CERCLA, 42 U.S.C. § 9622(j)(1), EPA notified the United States Department of the Interior on August 24, 1992 and January 31, 1997, and the National Oceanic and Atmospheric Administration ("NOAA") on August 24, 1992, of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal trusteeship and encouraged the trustee(s) to participate in the negotiation of this Consent Decree.

E. The defendants that have entered into this Consent Decree ("Settling Defendants") do not admit any liability to the Plaintiff arising out of the transactions or occurrences alleged in the complaint, nor do they acknowledge that the release or threatened release of hazardous substances at or from the Site constitutes an imminent or substantial endangerment to the public health or welfare or the environment.

F. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on March 31, 1989, 54 Fed. Reg. 13296.

G. EPA conducted removal action at the Site beginning in the year 1992 and continuing to the present pursuant to Section 104 of CERCLA, 42 U.S.C. Section 9604. The removal action included, in general: (1) the removal of buried drums; (2) the construction, operation and

maintenance of groundwater interception wells and a groundwater interception trench; (3) the construction of a groundwater treatment plant on the Site; and (4) the installation, operation and maintenance of residential well filtration systems.

H. In response to a release or a substantial threat of a release of a hazardous substance(s) at or from the Site, EPA commenced on December 5, 1989, a Remedial Investigation and Feasibility Study ("RI/FS") for the Site pursuant to 40 C.F.R. § 300.430.

I. EPA completed an Ecological Risk Assessment in September 1995. The Baseline Risk Human Health Risk Assessment was also completed in September 1995. Based on these documents and the Remedial Investigation, a Feasibility Study ("FS") was prepared in July 1997, describing the remedial action objectives and comparing cleanup alternatives for the Site.

J. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the FS and of the proposed plan for remedial action on January 5, 1998, in a major local newspaper of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for remedial action. A copy of the transcript of the public meeting is available to the public as part of the administrative record upon which the Regional Administrator based the selection of the response action.

K. The decision by EPA on the remedial action to be implemented at the Site is embodied in a final Record of Decision ("ROD"), executed on November 18, 1998, on which the State has given its concurrence. The ROD includes EPA's explanation for any significant differences between the final plan and the proposed plan as well as a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA.

and any other applicable plans or documents developed pursuant to this Consent Decree. In the event that Settling Defendants fail to take appropriate response action as required by this Section, and EPA takes such action instead, Settling Defendants shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XV (Reimbursement of Future Response Costs).

44. Nothing in the preceding Paragraph or in this Consent Decree shall be deemed to limit any authority of the United States: (a) to take all appropriate action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site; or (b) to direct or order such action, or seek an order from the Court, to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, subject to Section XX (Covenants Not to Sue by Plaintiff).

XV. REIMBURSEMENT OF FUTURE RESPONSE COSTS

45. a. Settling Defendants shall reimburse the EPA Hazardous Substance Superfund for all Future Response Costs incurred by the United States not inconsistent with the National Contingency Plan. The United States will send Settling Defendants a bill requiring payment that includes a cost summary, setting forth direct and indirect costs incurred by EPA, DOJ, and their contractors on a periodic basis. Within fourteen (14) days after Settling Defendants receive the bill, they may make a written request to EPA for the supporting cost documentation. This supporting cost documentation shall include cost summary reports, work assignments, technical work assignment status reports, direction documents, delivery orders, and other related

documents for EPA and its contractors as applicable but not including confidential business information. Settling Defendants shall make all payments within thirty (30) days of Settling Defendants' receipt of each bill requiring payment, except that if the Settling Defendants request the supporting cost documentation in a timely manner, payment shall be made within ninety (90) days after Settling Defendants' receipt of the supporting cost documentation, except as otherwise provided in Paragraph 46. The Settling Defendants shall make all payments required by this Paragraph in the form of a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund" and referencing the EPA Region and Site/Spill ID #03Y2, DOJ Case Number 90-11-2-06036, and the name and address of the party making payment. The Settling Defendants shall send the check(s) to United States Environmental Protection Agency, Region III, Attention: Superfund Accounting, P.O. Box 360515, Pittsburgh, PA 15251-6515, and shall send copies of the check(s) to the United States as specified in Section XXV (Notices and Submissions) and to the Docket Clerk (3RC00), United States Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, PA 19103-2029.

b. Notwithstanding Paragraph 45.a, the Settling Defendants shall be obligated to reimburse the United States for oversight costs incurred in connection with Remedial Design and oversight of Removal Actions only if the decision in United States v. Rohm & Haas Co., No. 92-1517 (3rd Cir. Aug. 12, 1993), regarding the liability of responsible parties under Section 107(a)(4)(A) of CERCLA for EPA oversight costs is reversed or overturned by the Court of Appeals for the Third Circuit, the United States Supreme Court, or the United States Congress through amendment to CERCLA or otherwise. Nothing in this Paragraph 45.b shall be deemed to be an adjudication by this Court or an admission by EPA or the United States or shall be

EXHIBIT “7”

LAW OFFICES
BALLARD SPAHR ANDREWS & INGERSOLL, LLP

A PENNSYLVANIA LIMITED LIABILITY PARTNERSHIP
PLAZA 1000, SUITE 500
MAIN STREET
VOORHEES, NEW JERSEY 08043-4636
856-761-3400
FAX: 856-761-1020
WWW.BALLARDSPAHR.COM

PHILADELPHIA, PA
BALTIMORE, MD
BETHESDA, MD
DENVER, CO
LAS VEGAS, NV
PHOENIX, AZ
SALT LAKE CITY, UT
WASHINGTON, DC
WILMINGTON, DE

PARTNER RESPONSIBLE FOR
VOORHEES, NJ PRACTICE
BENJAMIN A. LEVIN

GLENN A. HARRIS
DIRECT DIAL: 856-761-3440
PERSONAL FAX: 856-761-9001
HARRISG@BALLARDSPAHR.COM

July 12, 2007

Via E-mail and Regular Mail

BOARHEAD DEFENDANTS

Re: Boarhead Farms

Dear Colleagues:

This letter provides amended and supplemented information with respect to certain of Plaintiffs' responses to discovery. I have also enclosed documents concerning Plaintiffs Agere and TI.

Interrogatory Nos. 73-77

The information set forth in my May 7, 2007 letter with respect to Interrogatory Nos. 73-77 is amended and supplemented as follows:

The costs of the response actions required by the OU-1 Consent Decree have been funded until very recently as follows: Ford - 20%; Cytec - 20%; SPS - 20%; Agere - 20%; NRM - 1/3 of 20%; TI - 1/3 of 20%; Worthington - 1/3 of 20%. However, Agere stopped making contributions to these and other OU-1 and OU-2 activities as set forth below. The costs of the response actions required by the OU-2 Consent Decree were funded as follows: Ford - 22.5%; Cytec - 22.5%; SPS - 22.5%; Agere - 10%; TI - 22.5%. Payment of EPA oversight costs with respect to the OU-1 work were funded as follows: Ford - 20%; Cytec - 20%; SPS - 20%; Agere - 20%; NRM - 1/3 of 20%; TI - 1/3 of 20%; Worthington - 1/3 of 20%. Payment of the EPA oversight costs with respect to the OU-2 work were funded as follows: Ford - 22.5%; Cytec - 22.5%; SPS - 22.5%; Agere - 10%; TI - 22.5%. Payment of the EPA past costs demand were funded as follows: Ford - 25%; Cytec - 25%; SPS - 25%; TI - 25%. Payment of the EPA interim costs demand were funded as follows: Ford - 20%; Cytec - 20%; SPS - 20%; Agere - 20%; NRM - 1/3 of 20%; TI - 1/3 of 20%; Worthington - 1/3 of 20%. Plaintiffs are not seeking contribution towards response costs incurred by NRM Investments or Worthington Industries,

Boarhead Defendants
 July 12, 2007
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but provided this information only to fully explain how the costs relating to the OU-1 Group were paid.

The amounts that were paid by each entity into the various OU-1 and OU-2 accounts include, with respect to the OU-1 and OU-2 RD/RA accounts, amounts spent on Group activities for which Plaintiffs do not seek recovery in this action. Therefore, Plaintiffs determined the amounts set forth in response to Interrogatory No. 73 by applying the respective percentages of all Group costs for a particular category of costs actually paid by Plaintiffs (and Worthington and NRM) to the amounts of such costs for which Plaintiffs seek recovery.

Plaintiffs' calculations used to determine the dollar amounts set forth in these responses are as follows:

With respect to OU-1 costs, assessments were made as follows: In approximately August of 2000 Ford, Cytec, SPS and Agere each paid \$50,000 and in approximately December of 2000 Ford, Cytec, SPS and Agere each paid \$40,000; TI paid \$36,666.66 toward these costs, NRM paid \$27,416.66, and Worthington paid \$26,666.66; in approximately August of 2001 Ford, Cytec, SPS and Agere each paid \$240,000; TI, NRM, and Worthington each paid \$80,000; in approximately February of 2002 Ford, Cytec, SPS and Agere each paid \$100,000; TI, NRM, and Worthington each paid \$33,333.33; in approximately July of 2002 Ford, Cytec, SPS and Agere each paid \$30,000; TI, NRM, and Worthington each paid \$10,000; in approximately August of 2003 Ford, Cytec, SPS and Agere each paid \$120,000; TI, NRM, and Worthington each paid \$40,000; in approximately March of 2005 Ford, Cytec, and SPS each paid \$120,000; TI, NRM, and Worthington each paid \$40,000; in approximately June of 2006 Ford, Cytec and SPS each paid \$100,000; TI, NRM, and Worthington each paid \$33,333.33. Each entity's percentage share of assessments was thus: Ford - 21.1267%, Cytec - 21.2831%, SPS - 21.1267%, Agere 15.3169%; TI - 7.2183%; NRM - 6.9740%; and Worthington - 6.9542%. Total costs of the response actions required by the OU-1 Consent Decree through 2006 are \$3,381,696.00 as reflected on the de maximis OU-1 invoice tracking chart. Each entity's share of these response costs was thus: Ford - \$714,441.94, Cytec - \$719,730.00, SPS - \$714,441.94, Agere - \$517,970.41, TI - \$244,100.99, NRM - \$235,840.25 and Worthington - \$235,170.46.

With respect to OU-1 EPA costs, on or about July 9, 2002 \$38,993.30 was paid from PHKS account 1305 to EPA to reimburse EPA's future costs. Ford, Cytec, SPS, and Agere each made payments of \$7,800.00 into that account from which the reimbursement was made; TI, NRM, and Worthington each made a payment of \$2,600.00. Ford, Cytec, SPS, and Agere thus each had a \$7,798.66 share of that reimbursement; TI and NRM each had a \$2,599.55 share. On or about September 11, 2003 \$169,720.60 was paid from MMWR account 402 to EPA to reimburse EPA's future costs. Ford, Cytec, SPS, and Agere each made payments of \$33,944.12 into that account from which the reimbursement was made; TI, NRM, and Worthington each made a payment of \$11,314.71. Those payments exactly paid each entity's share. On or about August 10, 2004 \$80,466.45 was paid from MMWR account 402 to EPA to reimburse EPA's future costs. Ford, Cytec, SPS, and Agere each made payments of \$16,093.29 into that account from which the reimbursement was made; TI, NRM, and Worthington each made a payment of \$5,364.43. Those payments exactly paid each entity's share. On or about August 3, 2005

Boarhead Defendants
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\$33,015.66 was paid from MMWR account 402 to EPA to reimburse EPA's future costs. Ford, Cytec, SPS, and Agere each made payments of \$6,603.14 into that account from which the reimbursement was made; TI, NRM, and Worthington each made a payment of \$2,201.05. Those payments exactly paid each entity's share. On or about June 2006 \$10,564.97 was paid from MMWR account 402 to EPA to reimburse EPA's future costs. Ford, Cytec and SPS each made payments of \$6,564.92 into that account from which the reimbursement was made; TI, NRM and Worthington each made a payment of \$2,188.31. Ford, Cytec and SPS thus each had a \$2,641.24 share of that reimbursement; TI, NRM and Worthington each had a \$880.41 share. Total OU-1 EPA costs are thus: Ford - \$67,080.44, Cytec - \$67,080.44, SPS - \$67,080.44, Agere - \$64,439.20, TI - \$22,360.15, NRM - \$22,360.15, and Worthington - \$19,760.60.

With respect to OU-2 costs, three assessments were made as follows: In approximately January of 2002 Ford, Cytec, SPS and TI each paid \$61,250 and Agere paid \$25,000; in approximately December 2002 Cytec made a payment of \$9,101.24 and a payment of \$1,190.87; in approximately July of 2003 Ford, Cytec, SPS and TI each paid \$450,000 and Agere paid \$200,000; in approximately February of 2004 Ford, Cytec, SPS and TI each paid \$112,500. Each entity's percentage share of assessments was thus: Ford - 22.8455%, Cytec - 23.2225%, SPS - 22.8455%, TI - 22.8455% and Agere 8.2409%. Total costs of the response actions required by the OU-2 Consent Decree through 2006 are \$2,186,424.06 as reflected on the de maximis OU-2 invoice tracking chart plus \$1,286.92 additional invoices from de maximis (available in the Document Repository), plus \$74,000 paid for the reconstruction of the DeRewal garage (as reflected on the Zaumeyer charts), for a total of \$2,261,710.90. Each entity's share of these response costs was thus: Ford - \$516,700.11, Cytec - \$525,225.85, SPS - \$516,700.11, Agere - \$186,384.81, and TI - \$516,700.11. This amends Plaintiffs' response to this interrogatory.

With respect to OU-2 EPA costs, on or about September 8, 2003 \$133,327.41 was paid from MMWR account 405 to EPA to reimburse EPA's future costs. Ford, Cytec, SPS, and TI each made payments of \$29,998.66 into that account from which the reimbursement was made; Agere made a payment of \$13,332.77. Those payments exactly paid each entity's share. On or about September 15, 2004 \$120,958.65 was paid from MMWR account 405 to EPA to reimburse EPA's future costs. Ford, Cytec, SPS, and TI each made payments of \$29,535.21 into that account from which the reimbursement was made; Agere made a payment of \$13,126.77. Ford, Cytec, SPS, and TI thus each had a \$27,215.70 share of that reimbursement; Agere had a \$12,095.87 share. On or about August 3, 2005 \$71,695.27 was paid from MMWR account 405 to EPA to reimburse EPA's future costs. This payment was made from funds available in the OU-2 RD/RA account. In order to calculate each party's share of this invoice, we applied the percentage that each entity paid for OU-2 response costs. Thus, each entity's share was as follows: Ford - \$17,850.18, Cytec - \$18,144.72, SPS - \$17,850.18, and TI - \$17,850.18. Total OU-2 EPA costs are thus: Ford - \$75,064.55, Cytec - \$75,359.08, SPS - \$75,064.55, TI - \$75,064.55 and Agere - \$25,428.61.

On or about June 17, 2002 \$7,062,962.06 was paid from PHKS account 1305 to EPA to reimburse EPA's past costs, including interest thereon. Ford, Cytec, SPS, and TI each

Boarhead Defendants
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 Page 4

made payments of \$1,750,000.00 and \$15,750.00 into that account from which the reimbursement was made. Each such Plaintiff's share of that reimbursement was thus \$1,765,740.52. On or about January 15, 2002 and April 5, 2002 a total of \$415,652.74 was paid from the same PHKS account to EPA to reimburse EPA's interim costs. Ford, Cytec, SPS, and Agere each made payments of \$84,534.32 into that account with respect to that obligation; TI, Worthington, and NRM each made payments of \$28,178.11 into that account as well. Ford, Cytec, SPS, and Agere thus each had a \$83,130.55 share of that reimbursement; TI, Worthington, and NRM each had a \$27,710.18 share.

Plaintiffs objected to the definition of "Total Cleanup Cost" as used in these interrogatories as overly broad, vague, ambiguous, unduly burdensome and not limited in time precisely because it was not clear exactly what information was being sought. Defendants' suggestion that Plaintiffs' responses are deficient because they included only "costs paid by or on behalf of the Plaintiffs" contradicts their statement with respect to the same interrogatories that the information sought concerned "the total clean-up costs of OU-1 and OU-2 incurred by each Plaintiff," illustrating that confusion. In any event, Plaintiffs may state their contentions in language of their choosing, not in language dictated by Defendants. Without waiving the objections set forth in Plaintiffs' interrogatory responses, the United States and the Commonwealth of Pennsylvania have each claimed to have incurred response costs that have not been reimbursed by Plaintiffs. By way of example only, EPA's past costs demand is in the Repository at bates numbers BSAI082007-BSAI082318; Pennsylvania's is at BSAI084400. Defendants have been provided a copy of the Commonwealth's demand last year for its past costs. General Ceramics no doubt incurred costs for the removal action it conducted. Other than NRM and Worthington, Plaintiffs are unaware of any other person who has incurred response costs with respect to the Site.

With respect to Interrogatory No. 77, Defendants did not ask Plaintiffs to "identify each specific Plaintiffs' payment in excess of its equitable share" as suggested in the April 30th letter. The question specifically asked whether Plaintiffs "*contend*" that any Plaintiff has spent amounts in excess of its equitable share of response costs. As set forth in response to these interrogatories, Plaintiffs will contend that they have collectively paid to date an amount in excess of their share of the costs identified in these answers. Plaintiffs will contend, as set forth on Exhibit A, that Plaintiffs' equitable share of past response costs incurred by them and response costs to be incurred by them in the future is 17.91% (including the 10.44% share that Plaintiffs will contend is attributable to the parties with whom Plaintiffs' have settled).

Plaintiffs have incurred through 2006 \$13,778,164.55 (the amounts contributed by each individual Plaintiff to the response costs for work required by OU-1 Consent Decree and EPA Oversight Costs pursuant to that decree, the response costs for work required by the OU-2 Consent Decree and EPA's Oversight costs related to that decree, and the payment of EPA's past and interim costs as required by the OU-2 Consent Decree.) Plaintiffs' equitable share of those costs is thus \$2,365,460.90 an amount in excess of the total dollar numbers paid by them of such costs. Of course, Plaintiffs contend that they have paid in excess of their equitable share of all response costs paid by the OU-1 and OU-2 Groups (including the amounts paid by NRM

Boarhead Defendants
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Page 5

Investments and Worthington Industries, Inc.) for the same reason. It is self-evident from these facts and this analysis that each individual Plaintiff has also incurred more than its equitable share of costs to date. For example, Cytec has paid \$3,204,448.71 in response costs, while its equitable share of all costs paid by the OU-1 and OU-2 Groups for such costs is only \$800,373.71. SPS, Ford, TI, and Cytec are jointly and severally liable for all future Consent Decree costs.

Interrogatory Nos. 119-23

I have enclosed selected pages of a February 1, 2001 Separation and Distribution Agreement by and between Lucent Technologies Inc. and Agere Systems Inc. These pages evidence the relationship between Agere and Lucent.

I have also enclosed the corporate documents evidencing that Bundy Corporation was merged into Plaintiff TI on or about June 25, 2001. I have also enclosed the April 25, 2001 Transfer Agreement between Smiths Group plc ("Smiths") and 329th Shelf Investment Company Limited ("329"), by which the shares of TI were sold by Smiths to 329. Section 2(6)(a) identifies the Boarhead Site and page 44 identifies the shares of TI included in the transaction.

Very truly yours,


Glenn A. Harris

GAH/dmn
Enclosures

EXHIBIT “8”

SECTION 13 - PAGE 4
REPORT DATE: 09/06/2000

CERTIFIED BY FINANCIAL MANAGEMENT OFFICE

BOARHEAD FARMS, PA SITE ID = 03 Y2

REPORT VERSIONS 1,2,4,5,6,7,8,9,10
PAST COSTS THROUGH JULY 31, 2000

EMERGENCY REMOVAL CLEANUP SERVICES (ERCS) CONTRACT

CONTRACTOR : ENVIRONMENTAL TECHNOLOGY OF NORTH AMERICA
CONTRACT NUMBER : 68-S2-3002

VOUCHER NUMBER	SCHEDULE NUMBER	RATE TYPE	ALLOCATION RATE
956-019-12	93607	National- Final	0.045886
956-019-12	93607	National- Final	0.045886
956-019-13	93681	National- Final	0.045886
956-019-14	93690	National- Final	0.045886
956-019-15	93751	National- Final	0.045886
956-019-16	93826	National- Final	0.045886
956-019-11D	93848	National- Final	0.045886
956-019-17	94055	National- Final	0.045886
956-019-18	94163	National- Final	0.036910
956-019-3D	94223	National- Final	0.036910
956-019-15D	94253	National- Final	0.036910
P1901-R	94390	National- Final	0.036910
956-019-19	94504	National- Final	0.036910
956-019-20	94810	National- Final	0.036910
956-019-21	95174	National- Final	0.036910
956-019-2D	95508	National- Final	0.036910

Contractor Information

DELIVERY ORDER NO.: 3002-03-019
PERIOD OF PERFORMANCE: 6/18/92 to 06/18/93

DESCRIPTION OF WORK:

The Contractor shall furnish the necessary personnel, materials, services, facilities and otherwise do all things necessary for or

BSAI 082200

SECTION 13 - PAGE 5
REPORT DATE: 09/06/2000

CERTIFIED BY FINANCIAL MANAGEMENT OFFICE

BOARHEAD FARMS, PA SITE ID = 03 Y2

REPORT VERSIONS 1,2,4,5,6,7,8,9,10
PAST COSTS THROUGH JULY 31, 2000

EMERGENCY REMOVAL CLEANUP SERVICES (ERCS) CONTRACT

CONTRACTOR : ENVIRONMENTAL TECHNOLOGY OF NORTH AMERICA
CONTRACT NUMBER : 68-S2-3002

incident to the performance of the work set forth below:

- Initiate Removal Action with appropriate personnel and equipment at the Boarhead Farms Site, (includes command post and necessary utility hook-ups);
- Provide site security when deemed necessary;
- Provide technical support as directed by the OSC;
- Work to include test pit excavation in order to confirm or disprove containers/drums of buried hazardous materials
- Should Hazardous materials be discovered - sample, characterize and prepare for transportation and disposal;
- Provide administrative support as necessary.

SUPPORTING DOCUMENTATION: Copy of Delivery Order No. 3002-03-019 and Statement of Work; Copies of Amendments of Solicitation/Modifications of Contract

BSAI 082201